LADY BIRD JOHNSON PARK 1932 CRABAPPLE
(Lady Bird Johnson Park 1932 *Malus* sp.)
NPS Witness Tree Protection Program
George Washington Memorial Parkway
Lady Bird Johnson Park
Columbia Island
Between Memorial Drive Circle and Potomac River
Arlington
Virginia

HALS VA-12
VA-12

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN LANDSCAPES SURVEY
National Park Service
U.S. Department of the Interior
1849 C Street NW
Washington, DC 20240-0001

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(Lady Bird Johnson Park 1932 *Malus* sp.)
HALS No. VA-12

Location:	George Washington Memorial Parkway, Lady Bird Johnson Park, Columbia Island, between Memorial Drive Circle and Potomac River, Arlington, Virginia
Owner/Manager:	U.S. Government, National Park Service
Present Use:	Ornamental and shade tree
Significance:	The Lady Bird Johnson Park Crabapple (*Malus* sp.) is significant because of its size, longevity, and association with the development of Columbia Island.
Author & Discipline:	Jonathan Pliska, Landscape Architectural Historian, 2006
Project Information:	The Witness Tree Protection Program was a pilot project undertaken by the Historic American Landscapes Survey and the National Capital Region of the National Park Service. The principals involved were Richard O'Connor, Chief, Heritage Documentation Programs; Paul D. Dolinsky, Chief, Historic American Landscapes Survey; Darwina Neal, Chief, Cultural Resources, National Capital Region; Jonathan Pliska, Historian, Historic American Landscapes Survey; Jet Lowe and James Rosenthal, Photographers, Heritage Documentation Programs.

PART I. HISTORICAL INFORMATION

Lady Bird Johnson Park is a constructed 157-acre island located immediately south of Theodore Roosevelt Island along the Virginia shore of the Potomac River. According to the park's cultural landscape inventory, it was originally known as Columbia Island and was created between about 1915-30 to "serve as the western terminus of Arlington Memorial Bridge and a symbolic entrance to the Nation's Capital."[1] Prior to this time, the Potomac flowed swiftly through narrow channels north of Theodore Roosevelt Island (HALS DC-12) and much more slowly to the south, where the river widened out into deeper tidal waters. These conditions resulted in the accumulation of sediment loads and the formation of muddy shoals at the present site of Lady Bird Johnson Park even before

[1] Kay Fanning and Judith Early, *Lady Bird Johnson Park, George Washington Memorial Parkway: National Park Service, Cultural Landscapes Inventory*, rev. ed. (Washington, D.C.: U.S. Dept. of the Interior, National Park Service, National Capital Region, Cultural Landscapes Program, 2004), (1)5.

formal construction began, and by the late nineteenth century, the site was covered by a narrow silt bar.[2] From 1872-1911 the U.S. Army Corps of Engineers coordinated the first attempt to improve navigation in the river, resulting in the creation of a channel capable of supporting large ships.[3] In 1892, a training dike, a line of dredged mud and roughly piled stone set below water level, was built along the Virginia shore in order to "increase the scouring effect" of the Potomac River and remove the extensive sedimentation load that had accumulated south of Theodore Roosevelt Island.[4]

In 1901 the Senate Park Commission, commonly known as the "McMillan Commission," began to develop plans for the present design of Washington's monumental core. The commission's plan for the National Mall, heavily influenced by the City Beautiful movement, has become one of the defining features of Washington, D.C. Less well known is the commission's plan for a "Columbia Island" to be developed south of Theodore Roosevelt Island, with a narrow water channel separating the two. Congressional acceptance of this plan modified the objectives of the Potomac River project to include the reclamation of sedimentation into usable land. By 1915, the Army Corps of Engineers had begun depositing dredged material south of Theodore Roosevelt Island, possibly incorporating the 1892 training dike.[5] By 1927, these dredging actives resulted in the formation of Columbia Island, although the unfinished island had already been added to Washington, D.C.'s park system in 1922. In 1932, both Arlington Memorial Bridge and Mount Vernon Memorial Highway opened to the public. Arlington Memorial Bridge crosses the island's width and connects Arlington National Cemetery and the Lincoln Memorial while Mount Vernon Memorial Highway, today part of George Washington Memorial Parkway, runs the length of the island and continues approximately fifteen miles south to the entrance of the Mount Vernon estate. The last phase of work on the Mount Vernon Memorial Highway project included seeding grass on Columbia Island and planting approximately seventy-five ornamental flowering trees, less than half of the approximately 200 originally planned. Large numbers of shrubs were also to be planted, but few were actually put in place. Four species of crabapple (*Malus halliana*, *M. atrosanguinea*, *M. floribunda*, and *M. sargentii*) were among the relatively few trees that were actually planted in 1932.[6]

The historic significance of the crabapple trees is, however, relatively unknown as later plantings have since come to define the public's perception of the island's landscape. Large-scale plantings did not take place until the Beautification Program of the Lyndon B. Johnson Administration. This work included the planting of over one million daffodils (*Narcissus* sp.) in 1967-68 and 260 deciduous and evergreen trees in 1968. Also in 1968, Columbia Island was renamed Lady Bird Johnson Park to commemorate the First Lady's

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[2] Ibid, (2A)1.
[3] Ibid, (2A)2..
[4] Gordon Chappell, *Historic Resource Study, East and West Potomac Parks: A History* (Washington, D.C.: National Park Service, 1973), quoted in Fanning and Early, (2A)3.
[5] Chappell, 56; KressCox Associates, P.C., *Historic Structures Report: Arlington Memorial Bridge, Washington, D.C.* (Washington, D.C.: National Park Service, 1985), 175-76.
[6] Ibid.

beautification and conservation efforts across the nation. The same year, landscape architect Edward D. Stone, Jr. began a tree-planting plan for the park that is still in the process of being implemented in the present day. This plan includes more than 2,000 dogwoods (*Cornus florida*), nearly 1,000 pines, and approximately 800 deciduous canopy trees.[7] Installed as part of Lady Bird Johnson Park in 1976, the Lyndon Baines Johnson Memorial Grove was designed as monument to the former president and his conservation ethos. In addition to the massive, roughly carved granite megalith at the center of the grove, approximately 900 white pines (*Pinus strobes*) are planted on the seventeen-acre site.[8] Because of the prominence of President and First Lady Johnson, the plantings installed under their direction and in their memory are the most obvious and best-documented vegetation present on the island. Though considerably older, the historical significance of the crabapples is not as readily apparent. The Lady Bird Johnson Park Crabapple is the largest and grandest of these remaining specimens, and one of the few trees still present which recall the original development of Columbia Island.

PART II. BIOLOGICAL INFORMATION

The Lady Bird Johnson Park Crabapple is one of four species of crabapple originally planted in 1932: *Malus halliana*, *M. atrosanguinea*, *M. floribunda*, and *M. sargentii*. However, due to the minute variations that differentiate these species from one another a positive identification has not been made. In general, these species are members of the 400-600 types of flowering crabapple trees under the genus *Malus* within the rose family Rosaceae.[9] Although there is significant variation within the genus, crabapples typically exhibit green, simple, elliptic leaves arranged alternately on stems before turning yellow and falling in autumn. The leaf margins are notched (serrate), minutely notched (serrulate), or with rounded teeth (crenate). Leaf venation is usually pinnate, with the veins arranged on either side of a primary vein or midrib, with individual leaves measuring from less than two inches to four inches long.[10]

Crabapples bloom from late April until late May or early June, and according to botanist Michael A. Dirr, "there are few other trees or shrubs which approach the beauty of the crabapple tree in full flower with colors ranging from white to purplish red."[11] The flowers are borne in flat-topped clusters known as corymbs, and have five petals, red stamens that produce copious amounts of pollen, and an inferior ovary. Fruits are round and fleshy. Among the four species in question, fruits range in size from ⅓" (*M. halliana*) to ½" in diameter (*M. sargentii*), and are red in color, although *M. floribunda* may bear yellow fruit as well.[12]

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[7] Ibid., (3A)1.
[8] Ibid., (2B)2.
[9] Michael A. Dirr, Manual of Woody Landscape Plants: Their Identification, Ornamental Characteristics, Culture, Propagation and Uses, 5th ed. (Champaign, Ill.: Stipes Publishing L.L.C., 1998), 630.
[10] Edward F. Gilman and Dennis G. Watson, Malus *spp.: Crabapple*, (Gainsville, Fla.: University of Florida, Institute of Food and Agricultural Sciences, November 1993), http://edis.ifas.ufl.edu/ST402 (accessed 12 June 2006).
[11] Dirr, 631.
[12] Ibid., 634, 641, 643, 654.

Bark coloration is typically a gray-brown on old trunks, and may be scaly. *M. atrosanguinea*, *M. floribunda*, and *M. sargentii* each exhibit mounded branching habits, while *M. halliana* grows upright in an almost vase-shaped manner.[13] Twenty-five feet is the consistent average for maximum height and crown spread, with many trunk diameters less than 12".[14] The Lady Bird Johnson Park Crabapple has not been measured, but appears to have grown into and possibly exceeded this upper size range.

Typical life expectancy for a crabapple tree is 25-60 years. Planted in 1932, the Lady Bird Johnson Park Crabapple has eclipsed the typical maximum age by over a decade. During this short lifetime, most crabapple species require full sun or optimal growth, but are tolerant to most environments, including, clay, sand, loam, acidic, alkaline, well-drained, and occasionally soil conditions. Trees are moderately drought tolerant, but have a low resistance to aerosol salts. Crabapples are generally urban tolerant and may be planted as lawn trees, in parking lots, highway medians, and streets without sidewalks. They are also resistant to verticillium wilt but are vulnerable to insects and diseases. While most pests pose little serious damage and can be treated with chemical sprays and horticultural oils, infestation by the eastern tent caterpillar can cause extensive defoliation and significantly weaken the infected tree. Likewise, crabapples are often prone to scab infections and several canker diseases. Additionally, cedar apple rust causes brown or rusty-orange spots to develop on the leaves, with badly spotted leaves falling prematurely. In cases of severe infection defoliation may be heavy.[15] Despite its age, the Lady Bird Johnson Park Crabapple has remained free of major damage from pests and disease and is in good condition today.

[13] Ibid.
[14] Gilman and Watson.
[15] Ibid.